



File Code: 3420
Route To: (2300)

Date: December 22, 2003

Subject: Post-Treatment Evaluation of Bark Beetle Prevention Spraying at Paliza Family and Group Campgrounds, Jemez RD, Santa Fe NF

To: District Ranger, Jemez RD

On December 22, 2003, I visited the Paliza Family and Group Campgrounds to evaluate the performance of a bark beetle preventive spray applied March 26-30, 2003. This treatment is expected to be effective for about one year. The trees selected for treatment met criteria for maintaining the present and future aesthetic character of these developed recreation sites. The objective of the treatment was to protect 53 ponderosa pines from attack by ips beetles (*Ips pini*, and *Ips calligraphus*) and the western pine beetle (*Dendroctonus brevicomis*); and to protect 2 piñons from attack by the piñon ips bark beetle (*Ips confusus*).

Background

During the fall of 2002, bark beetle activity was noticed in the Paliza Group Campground and the Forest and District requested assistance in developing options for managing the situation (reference 3420 evaluations dated October 11 and November 13, 2002). In February, Terry Rogers and I met Tom Malecek (Forest Timber Staff Officer) and a timber marking crew at the site to identify standing infested trees to be marked for removal. Next, trees suitable for protection were selected by landscape architect, Joan Hellen, with assistance from Tom Malecek, Terry Rogers, and myself. The diameter and species of each tree were recorded and a numbered metal tag was attached at about 8 feet above the ground.

Nearly 300 trees, including brood trees harboring overwintering beetles, were removed by spring. Spraying of the selected uninfested trees took place March 26-30, 2003. A contractor applied a 2% solution of carbaryl (Sevin SL®) to the main bole up to a 4 inch top, and to side branches 4 inches or greater in diameter. Smaller trees were treated from the ground, but larger trees required a hydraulic lift. The average cost of the treatment was about \$200 per tree.



Current Situation in the Paliza Group Site

Construction activity is underway in the Paliza Group site. Unfortunately, dozer work has taken out some of the sprayed trees and damaged others. In total, I was unable to locate 6 of the sprayed trees in the Owl Loop B and one in the Falcon Loop A. The orange paint butt mark designating the sprayed trees was evident on one uprooted tree which had a basal diameter of 13 inches.

Yellow flagging used to mark sprayed trees was evident on another 13 inch diameter log and I suspect other sprayed trees have been lost to road widening and other dozer activity. I could not determine if other piles of logs and slash contained treated trees. Root damage from dozer work has probably compromised another two of the sprayed trees, one 20 inches in diameter and one 28 inches in diameter. All standing tagged treated trees that were found were free of bark beetle attack. An untreated 16-inch ponderosa in the Falcon Loop A appears to have been killed by beetles this past season.

If felled trees are to be left intact as coarse woody debris along the stream corridor, the bark should be scored on two or three faces to facilitate drying, thus rendering the cambium unsuitable for bark beetle development. For any thinning yet to be undertaken, see the recommendations below for handling green logs and slash.

Current Situation in the Paliza Family Site

Thinning activities are under way in the Paliza Family site and look to be progressing well. All six sprayed trees were identified and appear to be healthy and free of bark beetle attack. No dozer damage has occurred to any of these treated trees. No new bark beetle attacks were observed on untreated trees. If thinning is continued beyond January, any green material greater than 4 inches in diameter should be removed from the site to prevent colonization by ips beetles. Green material generated late and covered with a heavy blanket of snow should be checked in the spring for bark beetle activity. Infested material should be removed within four weeks of attack.

Conclusion

Because few of the unsprayed trees were attacked, it is difficult to say if the sprayed trees were sufficiently challenged to test the efficacy of the treatment. I believe the sanitation work done to remove brood trees was critical in slowing the outbreak that was under way in the Paliza Group site. At this time, the application of Sevin SL appears to have provided protection, but we will continue to monitor both sprayed and unsprayed trees. The loss of the sprayed trees to construction damage is disappointing but perhaps can be avoided in the future.

/s/ Debra Allen-Reid
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cc: Joan Hellen, Thomas Malecek, Leonard Lucero, Douglas L Parker, Terry J Rogers, David A Conklin, John Beckley